

REMARKS

Upon entry of this Response, claims 1-2, 11-12, 15, 1719, and 24 will be amended, and claims 16, 22, and 27 will be canceled. Thus, claims 1-12, 15, 17-21, 23-26 and 28 will remain pending (with claims 13 and 14 having been withdrawn). No new matter has been added. Reconsideration and further examination are respectfully requested.

Claim Rejections – 35 USC 101

Claims 1-12 and 15-28 are rejected under 35 USC 101 as being directed to non-statutory subject matter. The claims have been amended in view of the Examiner's helpful comments. For example, claims have been amended to recite that a data stream is received via a communication adaptor and/or the practical result of facilitating communication with a remote device via the communication adaptor. Thus, reconsideration of the 35 USC 101 rejection is respectfully requested.

Claim Rejections – 35 USC 102 and 103

The previous pending claims are rejected under 35 USC 102 and/or 103 as being unpatentable over US Patent No. 7,065,544 ("Moreno") and/or US Patent No. 6,101,602 ("Fridrich").

As amended, claim 1 recites "applying a message digest function to [] selected bits" in a received data stream. Moreover, the pattern of bits that results from applying the message digest function is matched to a predefined pattern "stored in a search table, the search table including at least one entry pointing to a sub-table of the search table." Support for such a search table may be found, for example, in the search table 100 of FIG. 1 as originally filed along with the accompanying description in the specification at page 4, line 26 through page 9, line 13.

Applicant respectfully submits that neither Moreno nor Fridrich, taken alone or in combination, disclose or suggest such a search table. Instead, Moreno only discloses a library distance matrix 48 and a self distance matrix 50 that can be used to detect duplicate sequences

(e.g., as described in Moreno at col. 7, lines 6 to 35. These matrixes 48, 50, however, do not include “at least one entry pointing to a sub-table of the search table” as is now recited in claim 1. Fridrich similarly fails to disclose or suggest such a feature. Because neither of these references disclose such a feature, reconsideration of the 35 USC 102 and/103 rejections is respectfully requested.

Moreover, previously pending claim 12 (which recited the “message digest function” now included in claim 1) was rejected under 35 USC 103. According to the Office Action, it would have been obvious to add the message digest function as seen in Fridrich to the system described by Moreno “because it would enable to authenticate the digital data.” In support of this statement, the Office Action cites the following sections of Fridrich reproduced here for convenience:

Therefore, one object of the present invention is to provide a method that authenticates digital data, especially digital images.

Another object of the present invention is to provide a method that authenticates digital data by means of embedded code that functions in a manner similar to that of a watermark in a piece of paper.

These and many other objects and advantages of the present invention will be readily apparent to one skilled in the pertinent art from the following detailed description of a preferred embodiment of the invention and the related drawings, in which like reference numerals designate the same elements.

Col. 5, lines 1-10.

Step No. 1 proceeds as follows. The watermark is a concatenation of two or more bit-strings. The first bit-string will be the author's ID; the second, a function of the image (an image digest can be obtained using classical cryptographic hash functions or message digest functions). These two bit-strings are necessary to make the watermark pattern depend on both the author's ID and the image content. Additional optional information can be added to the watermark, such as the date and time of the origin of the image, serial number (for tracking purposes should a single copy be distributed to several users), etc. Both the author's ID bit-string and the image digest should have more than 64 bits to prevent a brute-force search for the key under a known-plain-text type of attack.

Col. 6, line 65 to Col. 7, line 11.

3. The method of claim 1, wherein said step of applying includes a message digest function.

Col. 9, claim 3.

Applicant respectfully suggests that these passages fall short of a motivation to combine the references in such a way as to produce the invention as recited in claim 1. In rejecting claims under 35 USC § 103, the Examiner bears the initial burden of presenting a *prima facie* case of obviousness. A *prima facie* case of obviousness is established by presenting evidence that would have led one of ordinary skill in the art to arrive at the claimed invention. Evidence of a suggestion, teaching, or motivation to modify a reference may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be solved, although “the suggestion more often comes from the teachings of the pertinent references,” In re Rouffet, 149 F.3d 1350, 1355, 47 USPQ2d 1453, 1456 (Fed. Cir.1998). The range of sources available, however, does not diminish the requirement for actual evidence. That is, the showing must be clear and particular.

The teaching or suggestion to make the claimed combination must be found in the prior art, and not based on the Applicant’s disclosure. “To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references.” Ex parte Clapp, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). The fact that references can potentially be modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. MPEP 2143.01.

The absence of any motivation in the prior art (and the lack of a convincing line of reasoning) to use message digest function when searching for a match to a sequence of bits in a received data stream indicates that the Examiner has simply used Applicant’s disclosure as a motivation to combine the references – the essence of impermissible hindsight reconstruction.

Because there is no teaching or suggestion to modify the references in this way, a *prima facie* case of obviousness has not been established. The rejection of claim 1 should be reversed.

The other claims depend from claim 1 or contain limitations similar to those recited in claim 1 and should be allowable for the same reasons.

Moreover, claim 12 has been amended to recite that the search table includes “a root table; at least one trie sub-table; at least one strand sub-table; at least one match sub-table; and at least one wildcard sub-table.” Support for this change can be found, for example, in FIGS. 1 and 2 of the application as originally filed along with the accompanying description in the specification at page 4, line 26 through page 12, line 12. Applicant respectfully suggests that the references, taken alone or in combination, do not disclose or suggest such a search table and this is an additional reason why claim 12 should be allowable.

Similarly, claim 15 has been amended to recite that it is determined whether a value resulting from application of a message digest function to a selected set of bits matches a predetermined value stored in a search table. In addition:

if the resulting value does match the predetermined value, access a portion of the search table linked to the predetermined value and continue the search in accordance with the linked portion of the search table; [and]
if the resulting value does not match the predetermined value, select a second set of bits, subsequent to the first set of bits and including the predetermined number of bits, from the data stream and continue the search in accordance with the second set of bits.

Applicant respectfully suggests that the references, taken alone or in combination, do not disclose or suggest such a process and this is an additional reason why claim 15 should be allowable.

CONCLUSION

Accordingly, Applicant respectfully requests allowance of the pending claims. If any issues remain, or if the Examiner has any further suggestions for expediting allowance of the present application, the Examiner is kindly invited to contact the undersigned via telephone at (203) 972-0191.

Respectfully submitted,

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Date

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